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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,115	06/20/2001	Shigeto Adachi	209937US-2	3477

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

MAYEKAR, KISHOR

ART UNIT PAPER NUMBER

1753

DATE MAILED: 09/09/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/884,115

Applicant(s)

ADACHI ET AL.

Examiner

Kishor Mayekar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) 6,7 and 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1/1 ✓ 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of invention of Group I, claims 1-5 and 8-16 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### *Specification*

2. The disclosure is objected to because of the following informalities: the error in line 5 from the last line in page 12 of the specification that the voltage is not more than 100 V. Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

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requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objections***

4. Claims 1, 2, 8 are objected to because of the phrase "so as". It needs to be deleted. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 4, 5, 9-12 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase "at least one electrode" (second occurrence) is confusing as whether it is the same electrode recited earlier or another.

In claim 2, the phrase "rod-like" is indefinite

In claim 4, the same is applied to claim 2 to the phrase "rod-like".

In claim 5, the same is applied to claim 2 to the phrase "rod-like".

In claim 9, the same is applied to claim 2 to the phrase "rod-like".

In claim 10, the same is applied to claim 2 to the phrases "rod-like" and "ring-like".

In claim 11, the same is applied to claim 2 to the phrases "rod-like" and "ring-like".

In claim 12, the same is applied to claim 2 to the phrase "rod-like".

In claim 16, the same is applied to claim 2 to the phrase "rod-like".

***Claim Rejections - 35 USC § 102 and 103***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

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invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8-11 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by LOCKE et al. (6,491,797). See Fig. 2; col. 7, lines 26-55 and col. 5, lines 46-49.

10. Claims 1-5, 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over LOCKE '797. LOCKE's invention is directed to a method of oxidizing an organic contaminant in an aqueous medium by the use of a corona discharge procedure. In Fig. 1, LOCKE discloses an apparatus for carrying out the method which comprises a pair of electrodes, at least one of the electrodes being arranged to be dipped into the aqueous medium; and means for applying a pulsed power between the pair of electrodes. LOCKE further discloses in col. 6, lines 4-20 the

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use of a voltage of at least 20 to about 45 kV or more, in col. 8, lines 9-12 the superimposing of the pulse voltage with a small DC bias voltage to yield a higher peak voltage to further increase the streamer intensity, and in col. 5, lines 46-54 the use of wire electrode in a point-to-plane geometry. The difference between LOCKE and the above claims is the field strength value or the diameter of the rod electrode. As to the diameter of the rod electrode, since LOCKE discloses the use of wire electrode or hypodermic needle electrode, his disclosure appears to lead one ordinary skill in the art at the time the invention was made towards the range of the recited diameter in absence of evidence to the contrary.

As to the field strength, since LOCKE discloses the use of peak voltage of at least 20 to about 45 kV or more and the superimposing of the pulse voltage with a small DC bias voltage to yield a higher peak voltage, his disclosure appears to lead one ordinary skill in the art at the time the invention was made towards the overlapping range of the field strength in absence of evidence to the contrary. Further, since the limitation of the field strength is a parameter of the process not a structure of the device, it has been held that the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. *Ex parte Wikdahl* 10 USPQ 2d 1546 (BPAI 1989); *Ex parte McCullough* 7

USPQ 2d 1889 (BPAI 1988); *In re Finterswalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235 (CCPA 1967).

As to the subject matter of claim 4, the shape of the rod electrode, change in shape was held to have been obvious, *In re Gibson* 5 USPQ 284.

As to the subject matter of claim 12, reversal of parts was held to have been obvious, *In re Gazda* 104 USPQ 400.

As to the subject matter of claim 13, the selection of any of known movement mechanism would be within the level of ordinary skill in the art.

As to the subject matter of claims 14 and 15, the provision of mechanical or automated means to replace manual activity was held to have been obvious, *In re Venner* 120 USPQ 192.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (703) 308-0477. The examiner can normally be reached on Monday-Thursday.

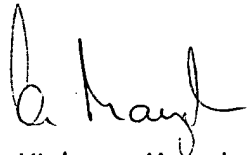
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (703) 308-3322. The fax



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phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'K. Mayekar', written in a cursive style.

Kishor Mayekar  
Primary Examiner  
Art Unit 1753

KM